



International Society for the History and Bibliography of Herpetology



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International Society for the History and Bibliography of Herpetology

The **ISHBH** is a not-for-profit organization established to bring together individuals for whom the history and bibliography of herpetology is appealing and to promote the knowledge of related topics among members and the general public. Membership is open to anyone who shares the aims of the society.

Membership. The biennial fee for 2004–2005 is US \$30, Institutions US \$50 and Life Membership US \$300. This fee includes a subscription to the society's biannual Newsletter and Bulletin (members can obtain back issues for \$7.50 each). Payment can be made with a personal check or a money order drawn on a US bank. Please submit the payments to our postal address below. In the EU and elsewhere you may pay the USD corresponding amount in EUR or SEK. From EU countries: IBAN: SE83 9500 0099 6042 0455 1206, BIC: NDEASESS. From elsewhere: Account No. 455120-6 with Postgirot, Stockholm, Sweden, Swift: NDEASESS. For any other method of payment please contact us first.

Members are encouraged to contribute with articles, news of meetings, hints on antiquarian trade, book reviews or participate in a literature exchange forum. The society organizes seminars, visits to libraries, museums, research stations, etc. in connection with herpetological meetings with international participation. The society works to facilitate informal contacts among members so that the members can meet, offer support in knowledge and transact exchanges of literature and ephemera.

Formal application for membership shall be directed to the chairperson and should be addressed: International Society for the History and Bibliography of Herpetology (ISHBH), Box 2123, SE-220 02 Lund, SWEDEN.

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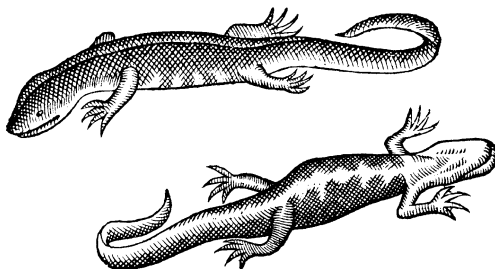
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Instructions for Authors

Authors submitting a manuscript do so on the understanding that the work has not been published before and is not being considered for publication elsewhere. All manuscripts are peer reviewed. Each issue of the Newsletter and Bulletin of the ISHBH is submitted to BIOSIS (U.K.) so that articles can be indexed for inclusion in the Zoological Record.

All manuscripts should be submitted in electronic form and preferably in Rich Text Format (*.rtf). If the manuscript is sent as a text file it should be accompanied by a hard copy to clarify formatting. We prefer to receive manuscripts as an e-mail attachment but manuscripts may also be sent by post on a 3 1/2 inch diskette. Include exact details on name(s) of the author(s) and file(s) submitted (diskettes should be labeled with this information), as well as contact information. The language of the Newsletter and Bulletin is English. British English or American English spelling and terminology may be used, but either one should be used consistently throughout the article. Consult the latest issue of the Newsletter and Bulletin for article format. The Editor reserves the right to adjust style to maintain uniformity.

Illustrations should also be submitted in electronic form. Considering the often delicate nature of illustrations in antiquarian books we feel that it is best that the owner of the work makes arrangements for scanning. However, you should contact the Editor first for advice. Color illustrations can be included but incur extra costs which will be at the author's expense. Illustration files can be sent on a CD-ROM, 100 Mb Zip cartridge, a 3 1/2 inch diskette or transferred over the Internet (contact the Editor first). Hard copies may in certain cases be submitted to the Editor for scanning but the Editor must be contacted first. The ISHBH cannot take responsibility for material sent by post.



*Newts from Edward Topsell's (1608)
The Historie of Serpents*

Society News

ISHBH 2004 Business Meeting, Luncheon and Tour to be held in Norman, Oklahoma on 29 May 2004

The business meeting of the society will take place in conjunction with the HL/SSAR/ASIH joint meeting at the University of Oklahoma. ISHBH will meet on Saturday, 29 May 2004 at 12 noon at the NCED Marriott Conference Center in Norman, Oklahoma, USA. Members attending the meeting should look at the announcement board regarding the meeting point or may contact any of the officers in the meeting. The business meeting will be held before or during our traditional group lunch.

Following the meeting and lunch a special guided tour has been arranged to visit the world class University of Oklahoma History of Science Book Collection. This tour will begin at 2:00 PM. This tour has been made possible by the kind invitation and prearrangements of Dr. Marilyn Ogilvie, Professor of the History of Science and Curator of the History of Science Collection, and Dr. Victor H. Hutchison of the Department of Zoology.

Due to space and security constraints the attendance at this special demonstration will be limited to members only and there is a maximum number of 15 people proposed by our hosts. Please register for your participation on the library tour at the announcement board or contact any of the officers at the meeting. For those who are unable to participate in the tour, a special exhibit open to all meeting attendees will also be held at the library.

Membership period extended to 2005

Membership in the Society commenced from 1999 with a biennial term (1999–2000) and renewals also biennially (2001–2002 and 2003–2004). The dues have been set to include the expense for two volumes typically each with two numbers in every membership period. With 8 numbers published by the fall of last year we can observe a slack of two numbers over five years. To overcome this the Council has re-

solved to extend the present membership period for everybody to include also 2005 (with no extra dues) by which time we plan to put out the two forthcoming volumes for which the present number is the first issue. New members can join from this year for two years.

Call for a new name for the Newsletter and Bulletin

Members of the ISHBH council have come to the conclusion that a simpler name for the *Newsletter and Bulletin of the International Society for the History and Bibliography of Herpetology* would facilitate citations of articles that appear in the journal. A simpler name would help to ensure a consistent style of abbreviation and thus minimize a potential source of confusion. To encourage members to submit a suggestion the council is announcing a contest. The prize for submitting the winning name will be a copy of Thomas Bell (1839) *A History of British Reptiles* 1st edition, xxiv, 142 pages, green clothbound.

Contest rules: The Council members that will be elected on 29 May 2004 in Norman, Oklahoma will be the judges, hereafter called the Judges. Deadline is 30 June. The Judges are not bound to accept any proposal. If no fitting name has been proposed the Judges will decide if the contest shall be abandoned or extended to 31 December 2004. Non-members of ISHBH can also participate. The Council members can participate with names but cannot win the prize. The Judges have the right to modify any name proposal. The Judges will in such case award the prize to the participant from where the original name was proposed. If several contestants have submitted the name that will be the winning name the winner will be chosen by lottery. Submit the proposal in an envelope marked "Name contest" and either mail to the address in Sweden (see p. 2) or deliver in a closed envelope to an officer at the meeting in Norman, Oklahoma. The decision by the Judges cannot be appealed.

Shorter Communications

Reflections on the antiquarian market for herpetological literature

A new antiquarian book dealer, Hermann L. Strack, specializing in science including zoology and based in the Netherlands announced his existence in February this year. He presented himself to his new clientele with a catalogue called *Vertebrates*, which was sent as an email, the addresses most likely obtained from a colleague dealer. There were about 650 items with 80 on herpetology on the list, the rest comprised of sections on birds, mammals, fish and one particular strong on taxidermy. The herpetology books, some appearing as specialized collections of separates averaged in price just below 60 euros in a spread from 20 to 450 euros (one euro is about 1.2 US dollar). The latter was l'Abbé Pierre-Joseph Bonnatere (1789–1790) *Tableau Encyclopédique et Méthodique des trois règnes de la nature. Erpétologie & Ophiologie*, a complete set of 69 plates in quarto but lacking the text. There were 18 items from the 19th century or earlier. I deem the prices as being generally reasonable or even low. I submitted my order for a few items after three hours, which was when I noticed the email message in the first place but I promptly received a reply that very well characterizes the present situation on the herpetological antiquarian book market: “Thank you for the order but the items you order are sold. Within half an hour we received the first six orders for herpetology books and then only the first non-herpetology order arrived.”

Books on herpetology that are a little bit old, say 100 years or more are getting scarce on the market, at least at prices you were comfortable with a few years ago and earlier and this in a world economy with otherwise quite stable prices. The antiquarian book dealers complain that they cannot replenish their stock of worthy books in the same pace they can be sold. Searching old herpetological books on the Internet will normally not reward the librarian or collector very

much unless he or she happens by sheer fortune to be there just shortly after the item was laid out or, alternatively, can endure extremely high pitched prices, practiced by some. The antiquarian book market on Internet during its first few years was worthwhile for the person who took the time to wrestle through the search engines but these times are over. Many search engines are well organized but older books on herpetology are scarce. This very case has demonstrated that herpetology books have a demand that is very special compared to books covering other animal classes. This said there are anyhow a handful of dealers that regularly distribute lists with scarce and out-of-print herpetological literature by email to those keen to receive them. Those that come to my mind are Antiquariaat Melchior (The Netherlands), Bibliomania! (USA), Chunmei Huang (Canada), Noriko I. Ciochon – Natural History Books (USA), and Tom Sinclair – Scaly Tales (USA). Most of the books and separates on these lists are quite recent but several are definitely reasonably priced out-of-print items and wanted by librarians, researchers and collectors. Occasionally there appear lists with particularly outstanding items that are deemed to go very fast when priced to sell. It follows that a successful buyer must be at the computer when the lists arrive and then order promptly, to say the least, by return email. Considering that not all people sit at the computers all time and there are more than 24 time zones over the world there will inevitably be wholehearted buyers who are not there when the list comes. There is a way to have a more client oriented distribution: I suggest that the antiquarian book merchant with a forthcoming list of attractive herpetological items announces a few days in advance an exact date and time for its email distribution. Everybody will then have an equal opportunity (if just the servers disburse the emails evenly) to watch for the arrival of the list.

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E-mail addresses where you can apply to receive antiquarian herpetology catalogue lists:

Antiquariaat Melchior
Bibliomania!
Chunmei Huang
Hermann L. Strack
Noriko I. Ciochon - Natural History Books
Tom Sinclair - Scaly Tales

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breck@herplit.com
spring.plum@rogers.com
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nathist@avalon.net
tsinclair2@houston.rr.com

(We will be happy to list in a forthcoming number any merchant not included above with periodical antiquarian book and reprint listings on herpetology – Editor)

ABOUT THE COVER

“The Rattle-Snake and the Mocking-Bird” in *Book of the World* (1852)

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A dramatic scene of a timber rattlesnake attacking the nest of mockingbirds (*Mimus polyglottos*) appeared in the *Birds of America* by John James Audubon (1785–1851), published in parts available by subscription by the author in London during the period 1827–1838. The rattlesnake plate appeared as plate number 21 in 1827. The plate book is renowned for both its handsomeness and for its immense size, a double elephant folio, which is almost a meter high, with 435 engraved and hand-colored plates. At that time it was ranked among the most outstanding natural history books and even today it is considered by many to be the greatest natural history book ever published. However, this particular plate provoked a debate about Audubon’s credibility as a nature observer. The issues under discussion were whether rattlesnakes could climb trees and whether they would attack bird nests. Charles Waterton (1782–1865), a British eccentric naturalist, traveler and popular author, led the attacks, which eventually developed into a vendetta against Audubon, probably encouraged by his friend George Ord from Philadelphia, who in turn had been a close companion of Alexander Wilson (1766–1813), the legendary bird book artist, author and publisher. Ord arranged the publication of Wilson’s posthumous works of comparable caliber and had, perhaps, a cause to worry about another bird book coming up on the market

The cover illustration to this issue, however, is taken from a book that appeared in 1852 in America with the rather general title *Book of the world. A family miscellany for instruction and amusement*, published in Philadelphia by Weik & Wiek, Publishers & Importers. In spite of

the obvious origin of the scene (Fig. 1) there is no acknowledgment of Audubon. *Book of the world* contains popular essays on natural history, geography and biography. The origin of most of the articles is a German annual publication, *Das Buch der Welt* published by Carl Hoffmann (Hoffmann’sche Verlags-Buchhandlung) in Stuttgart, first in 1842 and then continued for three decades.

The rattlesnake illustration is a lithograph colored by hand made in Germany. Actual image size is 160 by 195 mm. Each German annual contained up to 48 plates with illustrations produced with various techniques out of which 36 were colored. Herpetology was of a certain concern in each annual. Altogether I have counted 41 colored lithographic plates with herpetological themes evenly spread in the period from 1842 to 1869, thus with an average of about 1.5 every year but there could have been more herpetological plates published. Dr. Thomas Gaspey (1788–1871) served as editor and apparently an added author to the American edition. Volume one of 1852, according to *The CAT*, the Pennsylvania State University Libraries Catalog (<http://cat.libraries.psu.edu>), has gilt stamped pictorial binding illustrating the American Crystal Palace in New York. It has the same number of plates cited above as the original German edition. There is also a Swedish version, published with six volumes, the first three 1852–54 followed by another three 1856–62. As was apparently the case with the American edition there was much material with native connotation added.

The anonymous written account is entitled *The rattle-snake and the mocking-bird* and appears

on pages 57 to 62 in volume one (1852) of the American version and in volume two (1853) in the Swedish version (page 7 to 10). Less than a page in the beginning of the article deals with the rattlesnake and on the whole the content of the essay relates to the mockingbird. It can be assumed that the author did not discriminate the timber rattlesnake from rattlesnakes in general. The second paragraph begins:

The animal represented in our plate is the American Rattle-Snake, *Crotalus Horridus*, DAUDIN; it is also called *Crot. rhombifer* and *Crot. durissus*.

The use of the word “American” to describe species could denote that the paper originally was written for a non-American audience. Klauber (1972) pointed out that there was confusion in the application of the names *horridus* and *durissus* for more than a century. Holbrook (1836–40) and (1842) applied the name *Crotalus durissus* to the species that is now *C. horridus*. Linnaeus described both of them in the 10th edition of *Systema naturae* (1758). Holbrook, however, laments over the ambiguousness of these descriptions. F. M. Daudin, here credited as the author, has used the name correctly but he has never described any rattlesnake. Latreille in Sonnini & Latreille described *Crotalus rhombifer* in 1801 and K. P. Schmidt (1953) listed it in synonymy with *C. adamanteus*.

A few more passages from Book of the World:

It is found in nearly the whole of North-America, but is also met with in the north of South-America, less in the vast forests, than on high, arid mountain declivities, and in warm bushes. Usually it does not go in search of its prey; but will lie mostly for hours on the same spot; and when a squirrel, a mouse or a little bird approaches, darts forth its head, bites and poison its victim. These small animals run generally but a few steps further, and fall dead; the rattle-snake quietly attends the event, and then devours its prey.

The young are developed already in the eggs, and scarcely are they laid, than they creep out. At first they are not a span in length, and grow very slowly. A very old rattle-snake will measure from 7–8 feet. As before observed, the number of joints in the rattle increases with age; some have been found with upwards of forty of these horny cells; it is, however, not true that the age can be determined by the number.

The rattle-snake is very lazy; it climbs trees only to empty birds’ nests, but never, like the Boa constrictor to dart from thence on its prey; usually it lies curled up without notion. It is fortunate that when a larger animal approaches, it warns it off with a loud rattle, which is produced by a trembling motion of the tail; the unfortunate beings accidentally bitten by it, seldom escape death.

...
Our plate represents a rattle-snake threatening the nest of the American mocking-bird, which exposes its own life to ensure the safety of its young.

The American mocking-bird is well known by name, but the natural history of this bird by Alexander Wilson, the author of American Ornithology will be found interesting.

The rest of the article consists of direct extracts from Alexander Wilson’s text and deals only with the mocking bird.

Audubon had in April 1827 published a paper entitled *Notes on the Rattlesnake* (*Crotalus horridus*), in a letter addressed to Thomas Stuart Traill, M. D., &c. in Edinburgh New Philosophical Journal in England. It was reproduced in the Journal of the Franklin Institute and American Mechanics’ Magazine (vol. ii, N.S.: 32–37) in Philadelphia in 1828, later reprinted by Arno Press, New York (1978). Audubon had described in great detail how he had seen a large rattlesnake pursue up in a tree, capture, kill by constriction, and devour a gray squirrel. The rattler on the plate is threatening the mocking-birds with open mouth and a reverse curvature at the approximate centers of the fangs is no-



Fig 1. Plate No. 21 of John James Audubon's *Birds of America*, issued in London 1827.

ticeable. Criticism arose in the American press. The attack was laid to the door of George Ord the staunch friend and biographer of the rival author on birds, Alexander Wilson. Ord was the editor of the last two volumes of Wilson's *American Ornithology*. Ord's friend and correspondent in England, Charles Waterton renewed it with great vigor and proclaimed Audubon as

past known where a timber rattlesnake seemingly was foraging on birds in a tree about five meters above ground.

The anonymous artist of the plate on the cover has not reiterated the reverse curvature of the fangs. Klauber (1972:493–495) provides a good picture of the whole controversy that Audubon's

a new and greater Münchhausen. The condemnations were centered on the rattler's presence in the tree but also on the recurved shape of the fangs.

The critics were probably right in affirming that the rattlesnake never ascends trees for the purpose of destroying birds. However, Klauber states that it has been amply demonstrated that rattlesnakes do occasionally climb trees, and to considerable heights but that it is evident that Audubon confused his observations on rattlesnakes with others on blacksnakes. Indeed, Audubon later portrayed an analogous scene in which thrashers are defending their nest in a tree from a blacksnake (plate 116 of his *Birds of America*). Tree climbing behavior of *Crotalus horridus* has since been reported several times (Coupe 2001; Fogell *et al.* 2002; Sajdak *et al.* 2004). The last authors make a rather unconvincingly witnessed incidence in the

article and plate arose and his particular opinion on the fangs is that Audubon exaggerates them in both size and curvature.

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On the Herpetology of Perry's *Arcana* and Two Forgotten Reptile Names

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George Perry and the *Arcana*

One of the most poorly known British naturalists of the early 19th century is George Perry. Perry is best known for his 1811 folio work on mollusks, *Conchology*, a work that was widely ignored and criticized by the scientific establishment of the day. That work, its treatment, and the status of the names introduced therein have been considered in detail by Petit (2003). Other than the fact that he published the *Conchology* and the *Arcana*, to be discussed herein, nothing is known about George Perry, not even the dates of his birth and death.

The rare periodical *Arcana, or the museum of natural history: containing the most recent discovered objects. Embellished with coloured plates, and corresponding descriptions; with Extracts relating to Animals, and remarks of celebrated travellers* [sic]; combining a general survey of Nature (Fig. 1), hereafter referred to as *Arcana*, was broad in scope, covering a wide variety of animals. Although the *Conchology* was mentioned in early 19th century malacological literature, albeit mostly in derogatory fashion, the *Arcana* appears to have escaped the notice of the scientific community for just over a century. It is likely that it was ignored due to Perry's acceptance of Lamarckian genera, action that was intolerable to the prestigious Linnean Society. As discussed by Petit (2003: 9, 10) acknowledgement or acceptance of any non-Linnaean system at that time could have serious consequences.

Mathews and Iredale (1912) published a paper on the *Arcana* in which they listed all of the taxa with emphasis on the mollusks and birds, subjects in which they were interested. As a result,

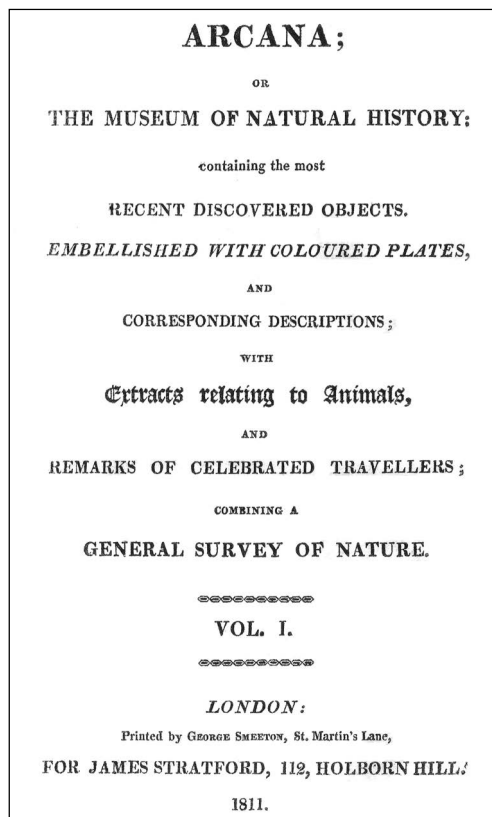


Fig. 1. Title page of Perry's *Arcana*.

Perry's names involving the mollusks and birds became known to some degree. For many other phyla Perry's work still remained unnoticed except for his nomina being listed by Sherborn (1922–1932) and later by Neave (1939–40). The fossil Mollusca of the *Arcana* were treated by Petit and Le Renard (1990) and the Recent Mollusca, together with the Mollusca of the larger *Conchology* by Petit (2003).

The *Arcana* was published in 21 monthly parts from 1 January 1810 through 1 September 1811

by James Stratford in London. Each part contained four colored plates with two signatures (8 leaves, 16 unnumbered pages) of descriptive or narrative letterpress. Of the 84 published plates, three show herpetological subjects treated herein. The remaining plates are of botany (1), birds (14), mollusks (22), echinoids (2), mammals (22), fish (8), insects (10) and trilobites (2). Some of Perry's figures are of previously described species but that is often difficult to determine as Perry rarely showed authorship, and many new names were introduced on both the genus and species levels. As neither the plates nor the pages are numbered, Mathews and Iredale (1912) numbered the plates sequentially using Roman numerals, a scheme followed by subsequent authors. Dates appear on most plates and can be considered correct dates of issue with three exceptions that do not affect the taxa treated herein. With two omissions in 1811 issues, every signature is designated by a letter on the first page of the signature. The sequence of the signature letters is potentially confusing. For the 1810 issues, the only part of the work involved in this study, the order of signatures is: A, B, [no C], D through I, [no J], K through U, [no V or W], X through Z, Aa, Bb. In order to specifically locate text pages on which names appeared, Sherborn used signature numbers (i.e., the page in signature B that would normally be number 3 if the signature pages were numbered is designated as page "sign. B"), a scheme followed by all later workers.³

The *Arcana* is perhaps the rarest of 19th century British natural history periodicals. Mathews and Iredale (1912) were aware of only four copies of the work, but one of us (RP) has since located a total of 23 copies of which 15 are incomplete. Aside from the cursory mention of the nomina by Mathews and Iredale (1912), the *Arcana* has been totally ignored from a herpetological perspective. We here provide a description of the three reptile accounts presented in this serial and evaluate the status of two forgotten names proposed therein.

Reptiles in the *Arcana*

The three herpetological subjects of the *Arcana* are a rattlesnake, a chameleon, and a turtle. Each account includes one colored plate and four pages of accompanying text. The plates of the chameleon and turtle were drawn by Perry himself. The rattlesnake was the work of J. C. Whichelo of the well-known Whichelo family of artists who worked in the late 18th and early 19th centuries. All were engraved by T. L. Busby.

The dating of the herpetological sections of the *Arcana* is unambiguous. The dates indicated on the plates are in perfect correspondence with the signatures in which the text appeared. The plate of the rattlesnake is dated "Feb. 1st 1810" and the text (4 pp.) appeared in signature D. The chameleon plate is dated "July 1810" and the text (4 pp.) is in signature O. The turtle plate is dated "Sept. 1810" and its text (4 pp.) appeared in signature S.

Crotalus horridus (Linnaeus, 1758). Perry, 1810 (Feb. 1), Pl. V, Signature D₁₋₄.

The rattlesnake is one of few animals of any kind treated by Perry for which authorship of a previously proposed scientific name is provided. The account is headed:

Crotalus horridus; or banded Rattlesnake. Linnaeus. *Vipera*, *caudisona*, *Americana*. Catesby.

Perry stated that the illustration of the rattlesnake was based on a living specimen in "Mr. Kendrick's Menagerie, Piccadilly, London." The bulk of the account is devoted to general considerations of rattlesnakes including comments on venom and the symptoms and cures of snake bite, the "charming Power" of the rattlesnake, reproduction and parental care, and the structure of the rattle. *Crotalus horridus* is noted as one of "three or four different species" of rattlesnakes and is distinguished by its size ("it frequently reaches the size of ten feet [305 cm] in length") and its dark transversely-oriented

markings. Rattlesnakes, according to Perry, are restricted to the "hottest parts only" of America and its islands. This belief accounts for the background palm trees in the plate (Fig. 2), which shows an improbably slender rattlesnake in an impossible posture.

The snake illustrated may well be *Crotalus horridus*, the timber rattlesnake, but this species is limited to the eastern United States and a small part of Ontario, Canada (hardly the hottest regions of the Americas) and the maximum size recorded for it is 189.2 cm (Ernst 1992). Indeed, even the largest rattlesnake, *C. adamanteus* Palisot de Beauvois, 1799, achieves a maximum size of only 244 cm (Ernst and Zug 1996), so Perry's comments must be dismissed as hyperbole or assumed to be based on confusion with the bushmaster, *Lachesis muta* (Linnaeus, 1766), which is tropical in distribution and does exceed 3 m in maximum size (Ernst and Zug 1996). From a nomenclatural perspective, the identity of the snake is unimportant as it is not associated with any newly proposed names.

***Chamaeleo pallida* Perry, 1810 (July 1), Plate XXV, Signature O₁₋₄.**

The text of Perry's account of the chameleon is chiefly devoted to a generic discussion of the structure of chameleon eyes, the composition of their diet (including the unlikely captive regime of bread soaked in milk and sugar), and the ability to change color. Perry noted the existence of several species: "the cinerea, nigra, pumila, rostrata, and the present one, the pallida from Egypt." Of the first four species, "pumila" may be identified as *Bradypodion pumilum* (Gmelin, 1789), but the other three do not correspond to names that had been proposed prior to 1810. Indeed the only other chameleon species described to that point were *C. chamaeleon* (Linnaeus, 1758), *C. africanus* Laurenti, 1768, *C. zeylanicus* Laurenti, 1768, *C. bifidus* Brongniart, 1800, and *C. senegalensis* Daudin, 1802. *Chamaeleo cinereus* Strauch,

1862 is a junior synonym of *C. chamaeleon* (Linnaeus, 1758) and *C. niger* Duméril and Bibron, 1836 is a junior synonym of *C. (α Furcifer) pardalis* Cuvier, 1829 (fide Klaver and Böhme 1997), but these names post-date Perry (1810) by decades. It appears likely that their use reflects Perry's unfamiliarity with the herpetological literature and his assumption that such common descriptors had previously been used as specific epithets for chameleon species. Likewise, Perry may have assumed that the name "rostrata" had been used for *C. bifidus*, the only one of the species then known to possess prominent rostral appendages. None of these names are of nomenclatural interest in any case, as, in addition to having been used without an intent to name new taxa, they are unaccompanied by illustrations or diagnoses, and they are not (with the possible exception of *C. rostrata*) attributable to any particular otherwise named species.

The syntax of the only sentence in the text in which the specific name *Chamaeleo pallida* appears could allow the interpretation that "pallida" was yet another use of a non-existent name by Perry. However, that it was intended as a new name is shown by the text heading, "Genus – Chamaeleo. Species – Chamaeleo pallida." It was also accepted as a newly proposed species by Mathews and Iredale (1912: 15). All of the comments in the text are about chameleons in general and no diagnostic features are provided for *C. pallida* except the obvious implication of pale color. This feature is particularly mentioned at the end of the penultimate paragraph on Signature O in a discussion of various species' powers of color change where it is stated that "the pale species herewith described the least of all." The description thus rests entirely on the graphic representation of the holotype in the accompanying plate, which constitutes an indication under Article 12.2.7 of the *International Code of Zoological Nomenclature*, thus rendering the name available. No further information is provided except that the animal is native to Egypt. Unlike the other two reptiles, no collection or



Fig. 2. *Crotalus horridus* from Perry's *Arcana*. Note the slender body and the palm trees in the background.



Fig. 3. *Chamaeleo pallida* Perry, 1810. Engraving in the *Arcana* based on Perry's original drawing.

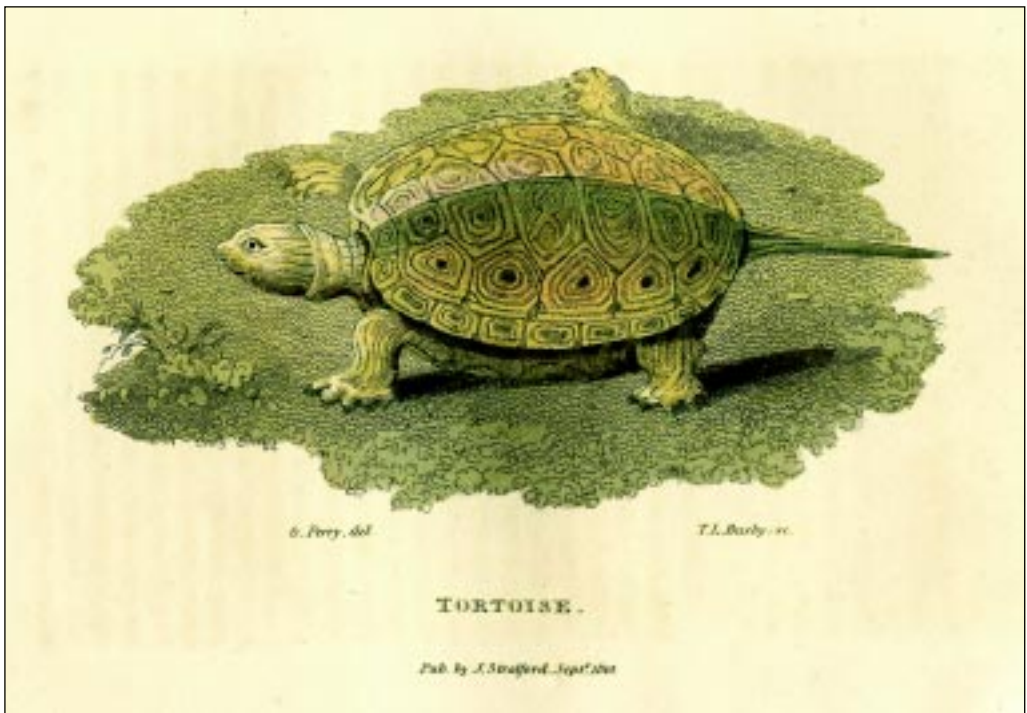


Fig. 4. *Testudo panama* Perry, 1810. Engraving in the *Arcana* based on Perry's original drawing.

origin is stated for the figured specimen of *C. pallida*. Much of Perry's material, however, came from William Bullock's famous "London Museum." The 1812 "Companion" to the Museum (Bullock, 1812) also figures a chameleon, but a different species. However, it repeats the story of a specimen fed on bread, milk, and sugar.

The Egyptian provenance of *Chamaeleo pallida* is suspect. Only two chameleon species, *C. africanus* and *C. chamaeleon* are known from Egypt or elsewhere in Mediterranean North Africa (Schleich *et al.* 1996). Perry's lizard lacks the characteristic neck flap of the latter species. It is a closer match to *C. africanus*, but lacks the moderately developed casque of this species. In addition, Perry's illustration shows a unicolored chameleon, whereas *C. africanus* almost always exhibits a lateral stripe (Neêas 1995). Assuming that Perry's locality is in error, but taking into account areas of the world that would have been accessible to collectors in the first decade of the 19th Century, it is probable

that the *C. pallida* of Perry is referable to the west African species *C. senegalensis*. Females of this species often appear unicolored and the cranial shape matches Perry's figure (Fig. 3) quite well (e.g., Neêas 1995, pl. 23, figs. 94–95). Therefore, we regard *Chamaeleo pallida* Perry, 1810 as a subjective junior synonym of *C. senegalensis* Daudin, 1802.

To the best of our knowledge the name *Chamaeleo pallida* has never subsequently been used as a valid name of a chameleon in the systematic literature and it is absent from the standard chamaeleonid synonymies of Boulenger (1887), Mertens (1966) and Klaver and Böhme (1997). The name did appear in the synonymy of *C. vulgaris* (= *C. chamaeleon*) provided by Anderson (1898), but as noted above, we disagree with this allocation. *Chamaeleo pallida* appears to have been cited on only two other occasions. First by Mathews and Iredale (1912), who merely noted in their discussion of the *Arcana*: "Plate XXV. is a new Chameleon, called *Chamaeleo pallida*, from

Egypt.” and later by Sherborne (1929) in his listing of zoological names.

Further, it should be noted that because the genus *Chamaeleo* is masculine and Perry’s specific epithet *pallida* is an adjective in the feminine gender, the name must be corrected to *C. pallidus* under Article 31.2 of the *International Code of Zoological Nomenclature*. In addition, Perry spelled the generic name with a ligature (*Chamaeleo*), which has here been omitted in accordance with the *Code*.

***Testudo pamana* Perry, 1810 (September 1), Plate XXXIII, Signature S₁₋₄.**

Although Perry’s account briefly discusses some general features of turtles, it is largely devoted to details of the species described, *Testudo panama*. Unlike the case of *Chamaeleo pallida*, it is clear that Perry intended to describe this animal as new. It was based on a live specimen in the collection of Captain Hoffman of Ealing. The account includes both diagnostic and biological information and also a reasonably specific type locality: “It is one of the smallest of its kind, hitherto discovered, and is a native of those countries of South America, adjoining to the Isthmus of Panama, inhabiting the fresh water rivers and pools of that region, which is called Terra Firma. Its general and favourite food consists of a small quantity of dressed meat; in cold weather and the nights of winter, it is constantly wrapped up in cotton, which has been deemed necessary to preserve it from the intemperate climate of Britain. ... The present Tortoise from Panama (called by the natives of that country the Ching-quaw) is supposed to be hitherto wholly undescribed, it has a considerable resemblance at the first sight to the *Testudo Literatus* of Thunberg [sic!; *Testudo lutaria* Linnaeus, 1758 syn. *Emys orbicularis* (Linnaeus, 1758)], but differs in the forms and markings of the back, and also in the number of plates forming the external circle. The head, back, and legs are of a bright orange colour, mixed in a very agreeable manner with dark

circles of grey, the edges being of a bright gold colour.”

Perry, who drew the turtle himself, clearly attempted to capture the distinctive color pattern of the animal with some accuracy. However, he was less careful with respect to other aspects of morphology, as the illustration shows six vertebrals and five pleural scutes rather than the anatomically correct 5 and 4, respectively. Despite inaccuracies, the figure quite clearly represents a species of *Trachemys*.

The taxonomy of Neotropical *Trachemys* has long been confused, and has recently undergone significant revision and review (e.g., Holman 1977; Ernst 1990; Legler 1990; Seidel 2002), and the application of names within the group remains inconsistent (e.g., Savage 2002). However, following the latest revision of Seidel (2002), there are two taxa occurring in the region (it is unclear from the description if the type locality is in Panama itself or adjacent Colombia). The species occurring in Panama and the immediately adjacent portion of Colombia (as well as much of the Atlantic versant of Mesoamerica) is *T. venusta venusta* (Gray, 1856), whereas a larger area of northern Colombia is inhabited by *T. callirostris callirostris* (Gray, 1856).

Both species possess yellow to orange ocelli, whereas the supratemporal (postorbital) markings are yellow to pale orange yellow to dark orange in *Trachemys venusta* and reddish orange in *T. callirostris* (Legler 1990; Bour 2003). Overall, however, the former species bears a greater resemblance to the animal depicted in Perry’s plate (Fig. 4). This species is quite large (maximum carapace length to 480 mm *vide* Bour 2003) in comparison to *T. callirostris* (260 mm *vide* Bour 2003), however, the mean carapace length of a sample of 213 adult female *T. venusta* was only 232 mm (Legler 1990) and males in a Panamanian population were found to reach maturity at only 125–135 mm (Moll and Legler 1971; Moll and Moll 1990). Thus,

Perry's comment on the small size of *Testudo panama* is not particularly informative. Further, it is probable that the small specimen in Hoffman's collection was still a juvenile, as evidenced by the retention of a prominent median keel, a feature that is typically lost in adult *Trachemys*.

The vernacular name noted by Perry ("Ching-Quaw"), which could help to confirm the identity of *T. panama*, has not been listed among those recorded for either species, or for any other South or Central American turtles (Mittermeier *et al.* 1980; Pritchard and Trebbau 1984; Savage 2002). However, the local name "jincotea," a variant of the more widely used "jicotea," is used for *T. venusta* in Mesoamerica (Campbell 1998) and may have been the source of the name reported by Perry.

On the basis of provenance and color pattern, we regard *Testudo panama* Perry, 1810 as a subjective senior synonym of *Trachemys venusta* (Gray, 1856). Despite the priority of *T. panama*, however, the (younger) name in prevailing usage should be maintained as it is clear that the provisions of Article 23.9.1 of the *International Code of Zoological Nomenclature* are met and that whenever these two names are considered as synonyms *Testudo panama* Perry, 1810 is to be regarded as a *nomen oblitum*, and *Emys venusta* Gray, 1856 as a *nomen protectum* (Article 23.9.2). The following paragraph will demonstrate that the requirements of Articles 23.9.1.1 and 23.9.1.2 have been met.

The name *Testudo panama* has never subsequently been used as a valid name, nor has it appeared in any synonymy (e.g., Boulenger 1889; Mertens and Wermuth 1955; Wermuth and Mertens 1961, 1977, 1996; King and Burke 1989; Iverson 1986, 1992; David 1994). It has been mentioned only by Mathews and Iredale (1912; "Plate XXXIII. figures a tortoise from Panama, which Perry calls *Testudo panama*.")) and by Sherborn (1929) in his nomenclator. In contrast, the name *venusta*, in combination with

the generic names *Trachemys*, *Pseudemys*, or *Chrysemys* and either as a full species or subspecies of *T. scripta*, has been in widespread use throughout the last 50 years (Mertens and Wermuth 1955; Wermuth and Mertens 1961, 1977; Moll and Legler 1971; Henderson and Hoevers 1975; Pritchard 1979; Alvarez del Toro and Smith 1982; Obst 1985; King and Burke 1989; Iverson 1986, 1992; Smith 1987; Ernst and Barbour 1989; Ernst 1990; Legler 1990; Moll and Moll 1990; Vogt 1990; Moll 1994; David 1994; Webb 1995; Lee 1996, 2000; Obst in Wermuth and Mertens 1996; Campbell 1998; Bour 2003).

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Long-Neglected Information on the Discovery of *Bipes* (Reptilia: Amphisbaenia)

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Abstract. An overlooked paragraph in Alzate y Ramírez' *Gazeta de Literatura de México* (1790) provides previously unknown information about the type and two other early specimens of *Bipes canaliculatus*. The nomenclatural history of the genus *Bipes* and its type species, *B. canaliculatus*, is described. The correct authorship of *Bipes canaliculatus* is Latreille (in Sonnini de Manocourt and Latreille, 1801), not Bonnaterre (1789), as has long been accepted, or Lacepède (1788), as argued by David *et al.* (2002).

The genus *Bipes*, endemic to Mexico, has had a unique nomenclatural history. The first specimen known to science of bipedal amphisbaenians was described as “Le Cannele” in the text of Lacepède (1788), but in the *Synopsis methodica* of that work, a large fold out table, the Latin name “*B. canaliculatus*” appeared for it. Bonnaterre (1789) also used Lacepède's name *B. canaliculatus*, without interpreting the initial. The initial B. has usually been regarded (e.g. David *et al.*, 2002) as an abbreviation for *Bipes*. Not only could that name be derived from the suprageneric nominal taxon *Bipeda* under which *B. canaliculatus* was placed, but Latreille (1801) explicitly so derived it – the first to do so. David *et al.* (2002) argued that, under the International Code of Zoological Nomenclature (hereinafter the “Code”), 1999, Art. 11.9.3, “Lacepède's specific epithet is valid... although it was described without a valid or available generic nomen”. Actually, that article states that “A species-group name must be published in unambiguous combination with a generic name (either explicit, or implicit by context)”. Lacepède's name was not published in combination with a generic name, even implicitly. Any of several interpretations could have been made of the intent in using the abbreviation *B.*, as for ex-

ample *Bipediculus* or *Bipediolus*, both nouns in the nominative singular case and having much the same meaning as *Bipes*. Furthermore, a single letter does not qualify as a generic name under the Code (Art. 11.8).

Under the Code, neither a generic nor specific name for “Le Cannele” of Lacepède (1788) is nomenclaturally occupied. The two other volumes, in duodecimo edition by Lacepède, also appearing in 1788, contained also the Latin names but the foldout table was reproduced on pages 443–462 in the second volume (David *et al.*, 2002). Therefore, authorship for both the generic and specific names of *Bipes canaliculatus* lies with Latreille (1801), as pointed out by Brygoo (1990), although conventionally (e.g. Smith and Smith, 1997; Flores-Villela, 1993a), Bonnaterre has been credited with it. That is incorrect, but so is attribution to Lacepède (1788), by Stejneger (1893), Cope (1894, 1900) and David *et al.* (2002).

The three species now recognized in *Bipes* (*B. biporus*, *B. canaliculatus*, *B. tridactylus*) were placed in several other genera prior to 1896. *Bimanius* Oppel (1811), *Chirotes* Cuvier (1817), and *Microdipus* Hermann (1804) were all new

La figura 6 representa una **Culebra bimana**, desconocida por los Naturalistas, segun me contextó el Conde Buffon en virtud de haberle remitido la única que pude conseguir en la Jurisdiccion de Tancítaro en 1780. por diligencias que hé practicado no he tenido noticia de que se hallen en otro parage. Como el Conde Buffon juzgaba que los seres en la Naturaleza forman una cadena continuada cuyos eslabones se diferencian por mutaciones insensibles, me aseguró que dicha Culebra bimana era el intermedio entre la Culebra y la Lagartija. En el Gavinete que ha presentado al Público D. Joseph de Longinos se hallan dos que le franquee de algunas que me proporcionó la generosidad del Señor D. Miguel Paez de Cadena, Superintendente de la Real Aduana, por lo propenso que es á coadyuvar al aumento de los conocimientos científicos.

Fig. 1. Original text from Alzate y Ramírez (1790:454); see text for translation.

genera based on *B. canaliculatus*, which was first referred to the polytypic genus *Lacerta* by Shaw (1795) and *Chamaesaura* by Schneider (1801). *Hemichirotres* Dugès (1894) was monotypic for *B. tridactylus*, and *Euchirotres* Cope (1894) for *B. biporus*.

The species name *B. canaliculatus* also has several synonyms. *B. alvarezii* Smith and Smith (1977), *Lacerta mexicana* Donndorff (1798), *B. canaliculatus multiannulatus* Alvarez (1966), *Chamaesaura propus* Schneider (1801) and *Lacerta sulcata* Suckow (1798) are all junior synonyms of *B. canaliculatus*.

Although known to herpetologists since only 1788, the species *B. canaliculatus* was known to Hernández long before through his explorations in Mexico 1571–1577, reported in 1648 (see Smith, 1970; Flores-Villela, 1993b). It is not known that any of the specimens he saw ever reached Europe for study. Therefore the earliest known museum specimen is the holotype, now lost (Brygoo, 1990), contrary to the statement by Gans (1967) that it is still extant, MNHNP 1151. According to Brygoo (1990), that specimen was not acquired by the MNHNP until 1863.

The type was said to have been collected by Velázquez, from an unknown locality in Mexico.

Brygoo (1990) stated that records show that it was found in México by “M. Velasques”, a Spanish scientist, who gave it, preserved in rum, to M. Polony, a doctor in Santo Domingo, for transport to the museum in Paris.

There is more to the story, however. A long overlooked short paragraph in Alzate y Ramírez (1790: 18, published September 21, 1790) indicates that he may have been the collector of the holotype (Flores-Villela and Hodges, 1999), and that it was from the vicinity of Tancítaro [Michoacán]. The text follows (see Fig. 1), translated. “The figure 6 [an accompanying plate showing dorsal and ventral surfaces, see Fig. 2] represents a “Culebra bimana”, unknown to naturalists according to a message from Count Buffon, in virtue of having sent to him the sole specimen that I was able to obtain in the Jurisdiction of Tancítaro [Michoacán] in 1780. Endeavors I have made have not indicated that they occur elsewhere. As Count Buffon regards these animals in nature as forming a continuous chain whose links are differentiated by slight mutations, he assured me that the “Culebra bimana” is intermediate between the Snake and the Lizard. In the cabinet [exhibit] made Public by D. Joseph de Longinos are two that I gave to him from others given to me through the generosity of Sr. D. Miguel Paez de Cadena, Superintendent of the Royal Customs,

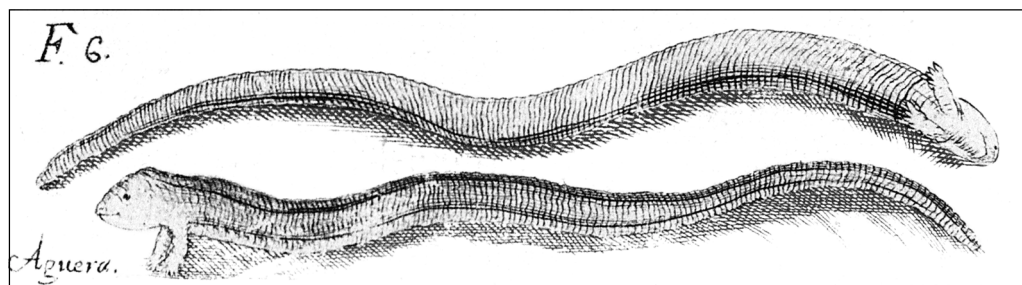


Fig. 2. Figure of the “culebra bimana” accompanying text (Fig. 1) in Alzate y Ramírez (1790).

for the purpose of augmenting scientific knowledge.”

That the specimen sent to Paris by Alzate y Ramírez became the lost holotype of *Bipes canaliculatus* cannot be confirmed, but it seems highly likely. Buffon’s monumental work, in which Lacepède published, was stated to include the Cabinet du Roi (see reference to Lacepède, 1788, 1789). Two specimens with different sources could have been sent at about the same time to Paris, but that is highly unlikely. That Velázquez was originally stated to be the collector of the type probably means simply that Alzate y Ramírez sent the specimen by Velázquez to the last point of relay to Paris, M. Polony, since the latter obtained the specimen from Velázquez.

The evidence available is sufficient to assume that the account by Alzate of the “Culebra bimana” pertains in part to the lost holotype of *Bipes canaliculatus*. Therefore the type locality, given simply as “Mexico” in the original description, is Tancitaro, Michoacán, by subsequent designation, as recorded by the presumed original collector. It was erroneously restricted to Mexcala, Guerrero (Smith and Taylor, 1950), and subsequently to the mouth of the Río Balsas, Guerrero/Michoacán (Smith and Smith, 1977).

The other specimens mentioned by Alzate y Ramírez are presumed lost. The idea that José Longinos Martínez established a public museum in Mexico City has a controversial his-

tory, although his collections, perhaps including a *Bipes* given to him by Alzate y Ramírez, may by 1808 have been used to form at least in part the Cabinet de Antiquities of the University (Beltrán, 1982). The specimens contained in this cabinet more likely were lost, since they are not mentioned as part of the collections of the “Museo Nacional” (for example see Herrera’s [1895] catalog). The two *Bipes* that Alzate mentioned he gave to Longinos-Martínez are not listed in any such catalogs. The fate is also unknown of the specimens over and above the two given to Longinos-Martínez.

The specimen described by Duméril and Bibron (1839) that was given to the Paris Museum in 1804 by Sessé and Mociño, with whose expedition Longinos Martínez was associated for a time as zoologist, very likely was one of the specimens obtained by Alzate y Ramírez – perhaps one of the two given to Longinos Martínez. That specimen, also now lost, cannot be the one that Lacepède wrote about in 1788. It appears that the Paris museum received two specimens, from different sources, prior to 1863: the one sent by Alzate y Ramírez, and later the one from the Madrid museum. There is a record of probably the second specimen given to Longinos Martínez; it was received at the Royal Cabinet of Natural History in Madrid in August, 1806, from the Sessé and Mociño expedition. This specimen is recorded in a document that lists several zoological materials that Pedro Cevallos forwarded to Mr. Manuel Castor González who was in charge of the collections in the Royal Cabinet (see document No. 544 in

Calatayud-Arinerio, 1984). Apparently a relationship was established between Duméril and Sessé and/or Mociño, to the point that Duméril and other colleagues visited the Royal Cabinet in Madrid in 1805, although access to the collections was denied to Duméril (Barreiro, 1992). This second specimen in question may be one of the 8 housed at the Museo Nacional de Ciencias Naturales in Madrid, but there are no data for these specimens, except that they were reviewed by E. Cusí in 1933 (García París pers. comm. 2003).

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